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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,582	11/29/2001	Donald F. Albert	AAC/2	6236

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EXAMINER
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CHANG, VICTOR S

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 04/11/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/997,582

Applicant(s)

ALBERT ET AL.

Examiner

Victor S Chang

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 24-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-23, drawn to an insulated barrier, classified in class 428, subclass 35.
  - II. Claims 24-31, drawn to a process of making an insulated barrier, classified in class 427, subclass 183.
  - III. Claims 32 to 37, drawn to a vacuum breach sensor, classified in class 252, subclass 408.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product such as Dewar flasks.
3. Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the

particulars of the subcombination as claimed because the combination as claimed does not require the particulars of the subcombination as claimed for patentability. The subcombination has separate utility such as a vacuum breach sensor.

4. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions they have different modes of operation or different functions.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Marta Gross on 3/31/2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-23. Affirmation of this election must be made by applicant in replying to this Office action. Claims 24-37 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer et al. (US 5827385).

Meyer's invention is directed to an evacuated insulated container formed of sheets of gas impermeable plastics material. Meyer teaches that sheets of gas impermeable plastics material are vacuum-formed to produce semi-rigid trays or shells each having side walls extending to form a peripheral flange. The formed shells define a cavity which is filled with an insulation media such as an open cell rigid foam material or a dry silica powder. In one embodiment, a media filled shell and a gas impermeable plastic cover sheet or partially assembled inner and outer shells separated by the media, are placed within a vacuum chamber, and overlapping edge portions or flanges are sealed by a moveable platen after evacuation of the media. The shells may include inner and outer lip portions on opposite side walls to provide for placing two of the insulated shells together in opposing relation to form an insulated container. In another embodiment, the overlapping flanges of the inner and outer shells are sealed together, and the insulation media between the shells is evacuated through a tube which is then closed and sealed (Abstract).

Claims 1 and 5 lack novelty.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-5 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (US 5827385) either taken individually, or in view of Izu et al. (US 5670224).

The teachings of Meyer are again relied upon as set forth above.

For claims 1 and 5, if, for the purpose of anticipation, the reference is believed to teach such a number of different embodiments that the specific parameters of each of the claims cannot be considered to be in possession of the skilled artisan, the Examiner believes that, alternatively, each of the claimed embodiments is at most a minor modification to one of ordinary skill.

For claims 2-4 and 10-14, Meyer lacks express teaching of a metal oxide coating such as silicon oxide on the outer surface. However, the Examiner takes Official Notice that it is well known that a coating of metal oxide such as silicon oxide is a useful barrier to oxygen and moisture. Alternatively, Izu's invention is directed to a barrier coating on a temperature sensitive substrate (Abstract). Izu teaches that a silicon oxide barrier coating improves the impermeability of the oxygen gas and water vapor (column 4, lines 7-10). Izu also teaches that the high barrier coating can be deposited onto polymer

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substrates of any shape, such as plastic bottles, jars or plastic containers, etc. (column 15, line 37 to column 16, line 2). As such, it would have been obvious to one of ordinary skill in the art to coat a silicon oxide barrier layer on the outer surface of Meyer's container, motivated by the desire to enhance the oxygen and water impermeability of the container, as taught by Izu.

Regarding claim 3, the Examiner notes that Meyer expressly teaches that a dry silica powder, which inherently encompasses fumed silica, is used as an insulation media as set forth above. Additionally, it is also well known alternative materials with low thermal conductivity such as carbon black can be used for thermal insulation. Note also as evidence of the state of the art Allen et al. (US 3715265) which teaches that superior thermal insulation effects are obtained by placing a carbon black containing composite within a gas-tight container, evacuating the container, and then sealing the container (Abstract and column 4, lines 36-46). As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to use various alternative well known thermal insulation media such as carbon black to make Meyer's container, motivated by the desire to reduce the cost and/or availability. Lastly, it is noted that Applicants appear to admit that carbon black or fumed silica inherently has a closed-cell structure (Specification, page 20, lines 22-27).

**12.** Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (US 5827385) in view of Applicants' admitted prior art.

The teachings of Meyer are again relied upon as set forth above.

For claims 6-9, Meyer lacks an express teaching of incorporating a vacuum breach sensor which detects atmospheric oxygen. However, it appears that Applicants admitted (Specification, page 22, lines 11-16) that the indicators used in the visual vacuum breach sensor is known art (e.g., US 5358876, 4349509 and 4169811). Further, the Examiner takes Official notice that applying a suitable indicator in an inert (i.e., non-reactive) liquid carrier to monitor the condition of vacuum in a sealed container is also old and well known. Note also as evidence of the state of the art Yoshikawa et al. (US 4169811) which teaches that an oxygen indicator can be used in a slurry state or in a state of solution, the function is not lost (column 5, lines 34-36), and the presence or absence of oxygen in a vacuum sealed container can be detected (column 6, lines 46-51). As such, in the absence of unexpected results, it would have been obvious to one skilled in the art to modify Meyer's vacuum insulated container to incorporate a suitable indicator and a liquid carrier (aqueous or non-aqueous) as visual oxygen (i.e., vacuum breach) sensor, motivated by the desire to monitor the condition of vacuum in the sealed walls of the container.

**13.** Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (US 5827385) in view of Applicants' admitted prior art.

The teachings of Meyer are again relied upon as set forth above.

For claims 15-20, Meyer lacks an express teaching of employing aerogel as the core insulating media. However, it appears that Applicants admitted that it is known art that a suitable organic aerogel is a thermal insulating material (Specification, page 18, lines 9-12). As such, in the absence of unexpected results, it would have been obvious



to one of ordinary skill in the art to use various alternative well known thermal insulation media such as an organic aerogel to make Meyer's container, motivated by the desire either to reduce the cost and/or availability or to obtain improved thermal insulation. Lastly, it is believed that a suitable organic aerogel is inherently a small pore area material and also a low density microcellular material.

For claims 21-22, the Examiner takes Official Notice that it is well known that aerogel is available in various forms, such as thin film, granular or monolithic forms.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In addition, the following references are cited of interest for making plastic container:

EP 607573 A1

Derwent Abstract of JP 05009317A

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC  
April 8, 2003

DANIEL ZIRKER  
PRIMARY EXAMINER  
GROUP ~~1300~~  
1700

*Daniel Zinker*